

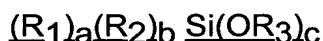
CLAIM AMENDMENTS

Please cancel claims 1, 2, 19-50, and 52-55, add new claims 57-59, and amend the remaining claims as follows. A complete listing of claims and their status in the above-identified application is shown below. This listing of claims supercedes all previous listings of claims:

1, 2. (Cancelled)

3. (Currently Amended) The A coating composition of ~~claim 2~~ adapted to enhance the adhesion of a polymeric coating applied to a substrate, said coating composition comprising:

a) at least one silane coupling agent, at least partial hydrolysates thereof or mixtures thereof, in a concentration greater than 25 weight percent, based on the weight of the total composition, represented by the following formula:



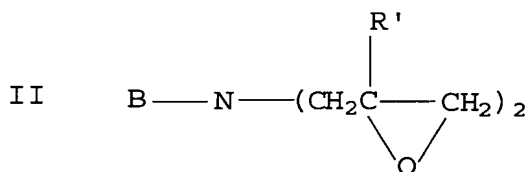
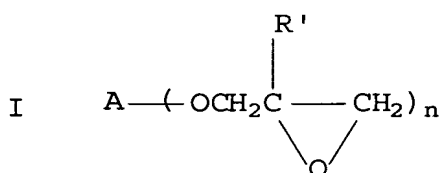
wherein each R_1 is an organofunctional group chosen from mercapto, glycidoxy, (meth)acryloyloxy, or a hydrocarbon radical chosen from C_1 - C_6 alkyl or phenyl, said hydrocarbon radical being substituted with said organofunctional group; each R_2 is a hydrocarbon radical having less than 20 carbon atoms independently chosen for each occurrence from aliphatic radicals, aromatic radicals or mixtures of such hydrocarbon radicals; each R_3 is C_1 - C_6 alkyl, phenyl, acetyl or benzoyl; a is 1, b is 0 and c is 3; and

b) an adhesion enhancing amount of an epoxy-containing material comprising at least two epoxy groups; said coating composition being substantially free of photochromic material and colloidal particles chosen from silica, alumina or mixtures thereof.

4. (Currently Amended) The A coating composition ~~of claim 1~~ adapted to enhance the adhesion of a polymeric coating applied to a substrate, said coating composition comprising:

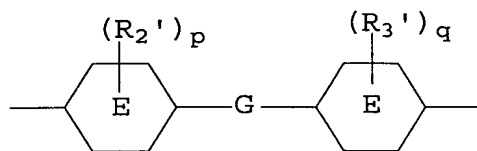
a) at least one coupling agent, at least partial hydrolysates thereof or mixtures thereof, in a concentration greater than 25 weight percent, based on the weight of the total composition; and

b) an adhesion enhancing amount of an epoxy-containing material comprising at least two epoxy groups; said coating composition being substantially free of photochromic material and colloidal particles chosen from silica, alumina or mixtures thereof; wherein the epoxy-containing material comprising at least 2 epoxy groups is chosen from materials represented by the following graphic formulae I and II or mixtures of such materials;

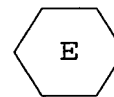


wherein

(i) R' is hydrogen or C₁-C₃ alkyl;
(ii) n is an integer chosen from 2, 3 or 4; A is chosen from C₂-C₂₀ alkylene, substituted C₂-C₂₀ alkylene, C₃-C₂₀ cycloalkylene, substituted C₃-C₂₀ cycloalkylene; the unsubstituted or substituted arylene groups, phenylene and naphthylene; aryl(C₁-C₃)alkylene, substituted aryl(C₁-C₃)alkylene; the group -C(O)Z(O)C- wherein Z is C₂-C₂₀ alkylene or arylene; the group -R-(OR)_m- or -(OR)_m-, wherein R is C₂-C₄ alkylene and m is an integer from 1 to 20; phthaloyl, isophthathoyl, terephthaloyl; hydroxyl-substituted phthaloyl, hydroxy-substituted isophthaloyl, hydroxy-substituted terephthaloyl; or a group represented by the following graphic formula:

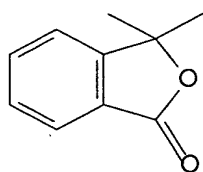


wherein R_2' and R_3' are each independently for each occasion chosen from C_1 - C_4

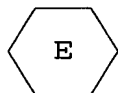


alkyl, chlorine or bromine; p and q are each an integer from 0 to 4;

represents a divalent benzene group or a divalent cyclohexane group; G is -O-, -S-, -S(O₂)-, -C(O)-, -CH₂-, -CH=CH-, -C(CH₃)₂-, -C(CH₃)(C₆H₅)-, -(C₆H₄)- or



when



is the divalent benzene group; or G is -O-, -S-,



-CH₂-, or -C(CH₃)₂-, when is the divalent cyclohexane group; said alkylene and cycloalkylene substituents being carboxy, hydroxy or C_1 - C_3 alkoxy; said arylene and aryl(C_1 - C_3)alkylene substituents being carboxy, hydroxy, C_1 - C_3 alkoxy or C_1 - C_3 alkyl; and

(iii) B is chosen from C_2 - C_{20} alkyl, substituted C_2 - C_{20} alkyl, C_3 - C_{20} cycloalkyl, substituted C_3 - C_{20} cycloalkyl; the unsubstituted or substituted aryl groups, phenyl and naphthyl; aryl(C_1 - C_3)alkyl or substituted aryl(C_1 - C_3)alkyl; said alkyl and cycloalkyl substituents being carboxy, hydroxy or C_1 - C_3 alkoxy, said aryl and aryl(C_1 - C_3)alkyl substituents being carboxy, hydroxy, C_1 - C_3 alkoxy or C_1 - C_3 alkyl.

5. (Previously Amended) The coating composition of claim 4 wherein: R' is hydrogen; A is chosen from C_2 - C_{10} alkylene, phenylene, -R-(OR) _{m} - or -(OR) _{m} -, wherein R and m are the same as defined hereinbefore; or phthaloyl; and B is chosen from C_2 - C_{10} alkyl, phenyl or phenyl(C_1 - C_3)alkyl.

6. (Currently Amended) The coating composition of claim 4 3 wherein the epoxy-containing material comprising at least 2 epoxy groups is chosen from: glycerol polyglycidyl ether; diglycerol polyglycidyl ether; glycerol propoxylate triglycidyl ether; trimethylolpropane triglycidyl ether; sorbitol polyglycidyl ether; poly(ethylene glycol)diglycidyl ether; poly(propylene glycol)diglycidyl ether; neopentyl glycol diglycidyl ether; N,N-diglycidyl-4-glycidyoxyaniline; N,N'-diglycidyltoluidine; 1,6-hexane diol diglycidyl ether; diglycidyl 1,2-cyclohexanedicarboxylate; diglycidyl bisphenol A; a polymer of diglycidyl bisphenol A; poly(bisphenol A-co-epichlorohydrin), glycidyl endcapped; diglycidyl of a hydrogenated bisphenol A propylene oxide adduct; diglycidyl ester of terephthalic acid; diglycidyl 1,2,3,6-tetrahydrophthalate; spiroglycoldiglycidyl ether; hydroquinone diglycidyl ether or mixtures thereof.

7. (Currently Amended) The coating composition of claim 4 3 further comprising a catalyst chosen from an acidic material, a material different from the acidic material adapted to generate acid upon exposure to actinic radiation, or a mixture thereof.

8. (Original) The coating composition of claim 7 wherein the catalyst is an acidic material and is chosen from an organic acid, inorganic acid or mixture thereof.

9. (Original) The coating composition of claim 8 wherein the catalyst is an acidic material and is chosen from acetic, formic, glutaric, maleic, nitric, hydrochloric, phosphoric, hydrofluoric, or sulfuric acid.

10. (Original) The coating composition of claim 7 wherein the catalyst is a material adapted to generate acid upon exposure to actinic radiation and is chosen from onium salts, iodosyl salts, aromatic diazonium salts, metallocenium salts, sulphonate esters of aromatic alcohols containing a carbonyl group in a position alpha or beta to the sulphonate ester group, N-sulphonyloxy

derivatives of an aromatic amide or imide, aromatic oxime sulphonates, quintone diazides or mixtures thereof.

11. (Original) The coating composition of claim 10 wherein the catalyst is a material adapted to generate acid upon exposure to actinic radiation and is chosen from diaryliodonium salts, triarylsulfonium salts or mixtures thereof.

12. (Cancelled)

13. (Previously Amended) The coating composition of claim 51 wherein the material comprising at least one (meth)acrylic group and at least one carboxylic group is represented by the following formula:



wherein R_4 is hydrogen or methyl, R_5 is a substituted or unsubstituted alkylene group having from 2 to 6 carbon atoms, and R_6 , R_7 , R_8 , R_9 , R_{10} and R_{11} are independently chosen for each occasion from hydrogen, straight or branched chain, saturated or unsaturated aliphatic, cycloaliphatic or polycycloaliphatic groups having from 1 to 20 carbon atoms and d is chosen from 0 or 1.

14. (Previously Amended) The coating composition of claim 51 wherein the material comprising at least one (meth)acrylic group and at least one carboxylic group is chosen from mono-2-(acryloyloxy)ethyl succinate, mono-2-(methacryloyloxy)ethyl phthalate, mono-2-(methacryloyloxy)ethyl maleate, mono-2-(methacryloyloxy)ethyl succinate or mixtures thereof.

15. (Currently Amended) The coating composition of claim 4 4 further comprising: a material represented by:



hydrolysates of said material or a mixture thereof; wherein M is chosen from silicon, titanium or zirconium, X is independently chosen for each occasion from

halogen, alkoxy groups of from 1 to 12 carbon atoms or acyloxy groups of from 1 to 12 carbon atoms, R_{12} is independently chosen for each occasion from alkoxy groups of from 1 to 12 carbon atoms, aliphatic hydrocarbon groups of from 1 to 12 carbon atoms, or acyloxy groups of from 1 to 12 carbon atoms, and e is the integer 1, 2, or 3.

16. (Original) The coating composition of claim 15 wherein M is chosen from silicon, X is independently chosen for each occasion from alkoxy groups of from 1 to 6 carbon atoms or acyloxy groups of from 1 to 6 carbon atoms; R_{12} is independently chosen for each occasion from alkoxy groups of from 1 to 6 carbon atoms or aliphatic hydrocarbon groups of from 1 to 6 carbon atoms; and e is the integer 1 or 2.

17. (Original) The coating composition of claim 15 wherein the material is chosen from methyltrimethoxysilane, methyl-triethoxysilane, methyltriacetoxysilane, methyltripropoxysilane, methyltributoxysilane, ethyltrimethoxysilane, ethyltriethoxysilane, dimethyldiethoxysilane, tetramethoxysilane, tetraethoxysilane, tetra-n-propoxysilane, tetra-n-butoxysilane, tetra(C₁-C₁₈) alkoxy titanates, methyltriethoxy titanium (iv), tetra(C₁-C₁₈) alkoxy zirconates, phenylzirconium (iv) trichloride, hydrolysates thereof, or mixtures thereof.

18. (Original) The coating composition of claim 10 further comprising at least one photosensitive dye.

19-50. (Cancelled)

51. (Currently Amended) A coating composition adapted to enhance the adhesion of a polymeric coating applied to a substrate, ~~said coating composition being (i) interposed between said substrate and said polymeric coating and (ii) in contact with said polymeric coating~~, said coating composition comprising:

(a) at least one coupling agent, partial hydrolysates of said at least one coupling agent, or mixtures of said coupling agent and said hydrolysates all in a concentration of greater than 25 weight percent, based on the weight of the total composition,

(b) an adhesion enhancing amount of an epoxy-containing material comprising at least two epoxy groups, and

(c) at least one material comprising at least one (meth)acrylic group and at least one carboxylic group,
said coating composition being substantially free of photochromic materials and colloidal particles chosen from silica, alumina or mixtures thereof.

52-55. (Cancelled)

56. (Amended) The coated article ~~coating composition~~ of claim 55 wherein the polymeric coating is a photochromic coating and the substrate is an organic polymeric material.

57. (New) A coated article comprising:

- (a) a substrate;
- (b) the coating composition of claim 3;
- (c) an at least partially cured polymeric coating; wherein the coating composition of (b) is interposed between the substrate of (a) and the polymeric coating of (c).

58. (New) A coated article comprising:

- (a) a substrate;
- (b) the coating composition of claim 4;
- (c) an at least partially cured polymeric coating; wherein the coating composition of (b) is interposed between the substrate of (a) and the polymeric coating of (c).

59. (New) A coated article comprising:
- (a) a substrate;
 - (b) the coating composition of claim 51;
 - (c) an at least partially cured polymeric coating; wherein the coating composition of (b) is interposed between the substrate of (a) and the polymeric coating of (c).